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ABSTRACT

This project increases opportunities for beginning farmers to learn about and implement sustainable farming methods through mutual-help discussion groups and continuing education opportunities. Local groups established in six areas in northeast Nebraska in 1991 constitute the Beginning Farmer Support Network (BFSN). At workshops held throughout the year, the groups discussed goal setting, financial planning, alternative crops, farming practices, enterprise options, and grazing practices. Twelve beginning farm families that attended the BFSN workshops were selected for whole-farm case study analysis of their farm entry strategies. They kept records on machinery, inventories, energy use, fertilizer and pesticide purchases and use, assets and liabilities, and farm and nonfarm income and expenses. The following recommendations developed by the project include: mechanisms to hasten loan approval, to supplement beginning farmers' cash down-payments, and trade up-front acquisition costs for longer-term financing would help beginners; programs and policies that foster businesses and job creation in small towns are essential, since beginning farmers rely on off-far employment to supplement their incomes; access to professional, educational, and extension services at nonstandard times and ways is needed; and information is needed that is geared toward basic facts, lowest-cost and least-input methods, and diversified integrated farms. Appended are farm family summaries. (TD)

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ED 388 472

Beginning Farmer Sustainable Agriculture Project

Interim Report (February 94)

A cooperative project between
Farm Families
Center for Rural Affairs
Nebraska Sustainable Agriculture Society
University of Nebraska

RC 020294

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Beginning Farmer Sustainable Agriculture Project

Interim Report (February 94)

Contents

Purpose	1
Results	2
Groups	2
Case Study Farm Families	4
Strategies	4
Finances	5
Social Attitudes/Values	6
Farming Practices	7
Recommendations	8
Agencies, Organizations, Policymakers	8
Beginning Farmers	9
Summary	10
Appendix	11

Beginning Farmer Sustainable Agriculture Project

Interim Report (February 94)

Beginning farmers participating in this project are disproving the conventional wisdom that young farmers can't get started in agriculture today. In a climate of agricultural doom and gloom, where the primary advice is to "get big or get out", the twelve families in this project are building farms with their management skill, sweat, and persistent vision. These families exhibit an optimism, a perseverance, and a willingness to work hard for a lifestyle they truly desire. Their "can-do" attitudes show that there is a future for young generations on the farm and that rural communities can endure. They have made steady progress in achieving goals of establishing and owning their own farms, including increasing their equity by an average of 16% in the first year of the project. They formed mutual support groups to share ideas and plan for educational activities. They also learned to farm in ways that protect the environment.

These young farmers (all are under age 40) have special economic and educational needs that are difficult to address with conventional extension methods. These farmers have severe time constraints and can rarely meet during normal business hours. They need information on integrating their resources and how to implement low-input practices. They have management abilities but little business experience or credit availability.

In spite of the difficulties and pressures to conform or give up, these farmers encourage others to follow them, because the main ingredients to their success, planning and perseverance, are available to anyone with dreams as strong as theirs.

The Beginning Farmer Sustainable Agriculture Project is a cooperative project between beginning farm families, the Center for Rural Affairs (CRA), the University of Nebraska, and the Nebraska Sustainable Agriculture Society (NSAS). It operatess from the Center's Hartington, Nebraska office. The project has been funded in part by the Nathan Cummings Foundation, the Public Welfare Foundation, the Pew Charitable Trusts, and USDA Sustainable Agriculture Research and Education Program (SARE) grants. Any opinions, findings, conclusions or recommendations expressed herein are those of the Center for Rural Affairs and do not necessarily reflect the views of the funders.

PURPOSE

The Beginning Farmer Sustainable Agriculture Project works to increase opportunities to beginning farmers for learning about and implementing sustainable farming methods through mutual-help discussion groups and continuing education opportunities. The project also documents beginning farmers' effectiveness both in using sustainable practices and in becoming established as farmers.

Young and would-be farmers need help getting started if they are to join the ranks of established farmers. There are now twice as many farmers over 65 years old as under 35 years old, and the number of entry-level farmers has been dropping. About half of US farmland is owned by farmers over 55 years old; many are likely to retire in the next 10 years. Farm size, land prices and equipment costs are increasing, which all present serious challenges to young people trying to "buy in" to farming. The next 10 years are a critical period for influencing the number of young farmers, because the barriers to farm entry will grow dramatically higher if the next round of farm transactions serves only to enlarge existing farms.

Beginning farmers are also an opportune group to target for sustainable agriculture techniques. Beginning farmers are generally more open to sustainable farming methods than are established farmers. They have not made the financial, intellectual and emotional commitment to conventional agriculture that many established farmers have made. Sustainable agriculture practices often replace purchased inputs with management or labor, which fits the resources of beginning farmers.

This project attempts to engage and encourage young and beginning farmers in two ways. First, the Beginning Farmer Support Network supports local groups of farmers who meet regularly to share ideas, experiences, support, and continuing education activities on sustainable agriculture. Our expectation is that these activities will contribute to the success of these farmers in becoming established and will encourage them to use sustainable agriculture practices. Second, a select group of beginning farmers and their

families are cooperating with the Center for Rural Affairs (CRA) to share their farm entry strategies, financial progress, farming practices, and values. Whole-farm analysis in a case study format allows discussion of these topics in the context of each family's goals and resources.

Results of this project will be made available to agencies, decision-makers, and organizations to help them understand and respond to the special needs of beginning farmers. This information will also be made available to other beginning farmers and educators to demonstrate farm entry strategies, strategy costs and benefits, and the likelihood of success.

RESULTS

GROUPS

The project selected six areas in northeast Nebraska in 1991 in which to establish local groups, which would together constitute the Beginning Farmer Support Network (BFSN). Informational meetings with farmers early in the year identified subject areas of interest. Workshops held through the year brought beginning and sustainable farmers together to meet each other and learn about sustainable agriculture practices. Some workshops were cosponsored with or organized by the Nebraska Sustainable Agriculture Society (NSAS). Local groups could receive support beyond the life of this project by affiliating with NSAS as local chapters.

In November, 1991, a three-day training course on whole-farm management entitled "New Ideas for Sustaining Farm Profits" was held (co-sponsored by the Center for Holistic Resource Management and this project). Forty people attended, including most of the cooperating farm families. Enthusiasm generated by this course resulted in the spontaneous formation of three groups to continue discussion of proactive farm management. Attendees also demanded scheduling of three more courses on specific topics (financial planning, grazing planning, and land monitoring) over the next 18 months.

The three groups with a common, intensive, personal background continued to meet and exchange ideas for the next twelve months. These groups were self-directed, with CRA staff attendance and support. They generally met monthly, at central locations or at members' homes. The groups discussed goal setting, financial planning, alternative crops, farming practices, enterprise options for farms and facilities, and grazing practices. The meetings included pot-luck dinners, evenings for farm record comparison, and farm walks to observe practices and progress. The groups planned and evaluated group educational activities such as workshops, lectures, seminars, and farm tours. Meetings were often held on weekend afternoons with child care provided to allow the entire family to participate.

Group members attended for social, business and educational reasons. *"The support group is doing a heck of a lot to help us,"* said one couple. *"The year that we got involved we ended up buying the farm, and the group really helped us to say 'Okay, it is doable, we can do it'."* *"I like being a part of the support network - it's so valuable to have a sounding board,"* said one farmer. *"It keeps us from rushing into decisions by thinking them through more and getting some feedback before we go through with things."* Another said, *"It is really educational to meet with other people. If we have a question, we ask, and there's an answer somewhere in the group."*

After a year, one group ceased meeting. Another that contained both farmers (2) and nonfarmers (2-10) then met only during winter months when the farmers were less busy. The most active group contained several of the farm

families cooperating in the project's case study analysis and was closest to the CRA staff headquarters.

Three other groups met only when additional workshops were held in their areas. Lack of a motivated leader in each area and lack of shared experiences in each group appeared to contribute to the low level of activity in these three groups.

Members of inactive groups complained that meetings were not directed enough, were not interesting enough, did not meet their needs, or took too much of their time. It appeared that groups needed outside assistance in planning meetings, developing meeting skills and in facilitating discussions, and could not be expected to be totally self-directed from inception. Plans are underway to reinvigorate the less active groups and to initiate new groups by using a series of workshops in each locality with themes of proactive management and sustainable agriculture. Additional guidance and support from project staff will be provided these groups.

Additional workshops and lectures were held for the groups in 1992 and 1993. Topics were suggested in the 1991 meetings and by farmers in the BFSN. These included:

- alfalfa production
- controlled grazing of poultry and livestock
- low input dairying
- low cost dairy farm tour
- reduced input farming
- risk strategies in farm marketing
- tree windbreaks
- horticultural enterprises farm tour
- time-controlled grazing farm tour
- ridge till farming farm tour
- introduction to HRM short course
- financial planning 3-day course
- biological monitoring farm tour
- beginning farmer panel discussion
- beef cattle and controlled grazing
- biological planning for livestock farming 2-day course
- sustainable agriculture in Australia
- build your own apple tree grafting workshop
- permaculture on Nebraska farms
- alternative livestock marketing
- questions and answers on intensive grazing
- organic gardening for home and market
- biological monitoring for livestock and crops 2-day course

The workshops emphasized farmers as presenters. This approach seemed to convey more credibility than scientist- or educator-presented activities. This method also instilled some confidence in beginning farmers that their ideas or practices, while unusual locally, were in fact accepted practices. One farmer, following BFSN encouragement for his grazing techniques, convinced an established neighbor to try the same practices to reduce pesticide application and improve animal performance.

Of the numerous sustainable agriculture topics presented in 1992 and 1993, only one of the topics, dealing with whole-farm planning and goal-setting, was widely adopted. This topic area included a series of workshops and multi-day courses that emphasized the importance of individual farm resources and each family's goals in achieving success on each farm. Several followup courses were demanded by participants following the introductory course in November, 1991, presented by the Center for Holistic Resource Management, of Albuquerque, NM. Some of the participants have made such changes as reducing their total acres farmed to allow more intensive management on the remaining farm, diversifying the farm enterprise mix, reducing purchased supplies, planning for and identifying farmland for purchase, defining farm and family goals, and increasing profitability of the farm.

Few of the featured practices in other workshops, lectures and tours were immediately tried by the twelve farmers who are being closely monitored. This is in part due to their apparent inability to implement alternative techniques. The techniques presented in the workshops may require specialized equipment or extra time. Moreover, the farmer must perceive that his current practices are inadequate. "Alternative" crops or methods may also entail additional risk, since they have not been proven by these farmers on their land. And not all practices will fit all farms. Thus it may take several exposures to alternative agriculture ideas or several years of experience before new practices are applied.

This time lag between exposure and application of new ideas makes frequent and effective idea exposure more important. The cooperating farmers responded to short, clear articles in newsletters and newspapers, especially about topics that surfaced repeatedly. Farmer-to-farmer discussions were effective in spreading ideas. One-on-one discussions with a friend or mentor over coffee or over the fence were also preferred methods of learning about new techniques. Some of the families took home-study courses, which allowed both partners to participate and fit the work into

their busy schedules.

The CRA staff published quarterly Beginning Farmer newsletters and interim monthly Beginning Farmer updates. Circulation stands at over 300 in 30 states. The newsletters contain articles on sustainable agriculture practices, alternative crops and marketing, state and federal issues affecting beginning farmers, human resources, and farm family profiles. The updates contain one-paragraph news stories, notices, and updates on cooperating farm families.

CASE STUDY FARM FAMILIES

Twelve beginning farm families who had attended the BFSN workshops in 1991 were selected as cooperators for whole-farm case study analysis of their farm entry strategies (Appendix). They agreed to cooperate in an intensive record-keeping and interview process. They agreed to keep records on machinery, supply and product inventories, energy use, fertilizer and pesticide purchases and use, assets and liabilities, and farm and non-farm income and expenses. They also agreed to be interviewed on personal values, farming practices, key decisions, and their attitudes toward farming, the environment, and their communities. Economic and farm input information was collected yearly while interviews were conducted twice yearly. Dr. Tim Powell, Extension Agricultural Economist from the University of Nebraska's Northeast Research and Extension Station designed the financial and inventory accounting methods, helped collect financial data and analyzed the results. In return, cooperators received discounts on project-sponsored courses, educational cost-share for other activities, and individual assistance from CRA staff for problem-solving, construction projects, planning, and record-keeping. A legal document and waiver described the relationship and agreement between the cooperators and CRA.

Project staff met with the cooperating families several times throughout the year for interviews and to collect economic data. Families were periodically interviewed for "Beginning Farmer Profiles" in the quarterly newsletter, which detailed their goals and strategies for acquiring land, equipment, facilities, and livestock, as well as their advice for other beginners. The Project sponsored a "Beginning Farmers Holiday" picnic for all the cooperating families to meet each other, meet the staff, and receive a project progress report in July, 1993. The Project Design and Evaluation committee met in July, 1993 to evaluate project progress, data collection and analysis to that point.

Each family of this group is unique (Appendix) and it is difficult to generalize about their needs or approaches. However, several general statements about this group follow in the sections below.

Strategies

Although each family is unique in its background and resources, their approaches to beginning farming have many similarities.

These beginning farm families have strong ties to the land and their communities. Five are on historic family farms and five more are close to relatives. Few of the families are able to provide extensive financial assistance to the beginners, but they are able to share equipment, labor and discussions. Some of the beginners have made formal financial arrangements or have used small family loans to get started. Although the financial support from families is small in dollar terms, the loans, shared equipment and labor, and emotional support have been critical elements in getting these beginners started.

Nearly all these families emphasize low debt as a virtue. They don't eschew all debt, as most are making payments on their land. But they consciously plan their farm operations to pay for operating expenses and expansion from income generated by the farming enterprises.

Nearly all families have off-farm jobs, and some have several. These families have found that the small size of their beginning farms doesn't generate enough income to both support a family and finance farm growth. They have responded by working off-farm to cover living expenses and used farm income to buy machinery or facilities that generate more farm income. Most families include in their goals that they want the farm to be capable of providing enough income for both operating capital and living expenses. However, several of the cooperators have stated that they don't want to give up their off-farm jobs because of non-monetary rewards such as social contacts, use of special skills, diversion from farm activities, feeling appreciated at the job, and enjoyment of the work.

Most of these families didn't finance their start-up with bank loans. Off-farm income, savings, family grants and loans, and in-kind trades were some of the sources for down payments, equipment, and first livestock. Bad weather, mistakes, market fluctuations, and lack of experience can all put the fledgling business at risk, and these families all felt that debt at start-up added undue pressure when they could not afford it. A bad year early in the startup process could result in complete loss if debt was secured by the farm.

These family farms all started small. One farmer started his dairy herd from calves he raised himself and "junk" machinery. Another started his beef herd from his high school 4-H projects. Another added enterprises as he gained experience and confidence in his management and farming abilities. These farmers also looked at additional equipment and facility purchases to see if they would make money or cost money. "We don't have a big heated shop with mercury lights for our equipment", said one woman. "We have a gravel driveway and a flashlight that works . . . usually." "I'm learning from my neighbors", said farmer. "One had such a muddy barnlot that he bought a four-wheel drive tractor to get through it. I think I would have changed the way water ran into the lot."

Livestock are the core of these young farm businesses. All the families have incorporated livestock into the farm or are planning to once they move onto the land, for several reasons. Livestock generally require less investment in land and equipment than crops do for the same total return. Livestock multiply with only some management, not additional investment. Livestock can eat farm waste products, crops (that currently sell for very nearly the cost of production), or plants that grow without investment in seed, machinery, or fertilizer. Investment in livestock facilities and equipment can be made gradually as the herd grows and as equity, income, and purchasing power increase. Livestock are a "value-added" crop, taking the raw materials of forage and water and converting them to meat, milk, wool, eggs, or other refinements of the basic plants.

Most of the families operated diverse farms. They planted more than one crop. They raised more than one type of livestock or sold them at differing ages. This strategy spread the risk of weather, disease, variable markets, or inexperience over several income sources. It also made use of the varied resources of the farm, such as different types of feed, soil or buildings. It allowed the families to use their labor and time more fully throughout the year for a variety of products. Crops raised for animal feed could also be sold instead of the animals or in addition to the animals if the harvest was good.

Finances

Although families shared their personal finances readily with the project staff, results of specific families are not presented to assure their privacy. Not all twelve families are included in all calculations, due to scheduling difficulties and due to one family leaving farming.

Increase in equity (assets minus liabilities) is often considered a major measure of financial success, although not all the families in this project included equity growth as a major family goal. Of the eleven families that shared financial information, beginning owner equity ranged from $1,000 to $263,000, averaging $83,000. Equity increased an average of 20% for eight of the ten reporting in 1992, averaging nearly $97,000 in January, 1993.

Some of these farmers had difficulty maintaining liquidity. ("Liquidity" is the ratio of assets that can be easily sold to short term debts or obligations. A ratio of less than 1.0 shows assets to be less than liabilities.) Although the average current asset-to-current liability ratio (excluding one extreme figure) was 1.67 in 1992 and 2.2 in 1993, four of nine were below 1.0 in 1992 and three were below 1.0 in 1993. Ratios ranged from 0.15 to 44.9 in 1992.

The average debt-to-asset ratio (comparing total debts to total assets) was 0.35 in 1993, a decrease from 0.37 a year earlier. The six least indebted beginning farmers in 1993 (of ten reporting) had an average ratio of 0.11, which was one-third the ratio for established farmers participating in the Nebraska Farm Business Association records keeping program during the same period. Little debt was incurred by the study group for equipment or livestock; most was for land or nonfarm loans.

Net farm income ranged from $25,000 to a loss of $3300 in 1992 (on an accrual basis, adjusted for inventories and depreciation). The three farmers with the least control over their operations (e.g. renting to others or just beginning the farm) experienced net farm losses in 1992. The five with over $6500 in net farm income averaged $14,200.

Nonfarm income ranged from 0 to $27,000. Farm income contributed an average of only one-third of the total family income for these young farmers in 1992, demonstrating the need for off-farm income to supplement the young farm business. Although a recent survey in northeast Nebraska indicated that 62% of the area farmers held at least one off-farm job in the family, the job provided less than one-third of the average family's income.

The farm records kept for this project were more intensive than any these families had kept previously. Two of the cooperators commented that they appreciated the techniques and discipline imposed in this project that enabled them to analyze their farm enterprises better.

Social Attitudes/Values

Cooperators were asked to complete a questionnaire on their attitudes about farming, family, community, and environmental concerns at the beginning of the project. Couples responded individually, and not all cooperators completed surveys. Numeric responses (1 showing agreement, 5 showing disagreement) were averaged for men, women and all respondents. The following generalizations are based on the averaged results.

The most important reasons for wanting to farm included "being my own boss" (1.7), "want to live in the country" (1.1), and "want to raise a family on the farm" (1.2). Men wanted to "work with nature" (1.0), "work outdoors" (1.0), and felt "agriculture is a good career" (1.9). Women in the study unanimously said one reason for farming was that their spouse wanted to farm (1.0). The group was ambivalent about "staying in their own community" (2.6), "farming is a good way to make money" (3.3), "I farm because my family farms" (3.0), and "I want to work alone" (3.1).

The group's goals included a strong component of land and community stewardship. They wanted to "leave the land better than they got it" (1.3), "pass on the opportunity to farm to their children" (1.4), "improve their community" (1.8), and "develop personal and family potential" (1.2), while not believing "a landowner can do anything he wants with his land" (3.9) and not caring strongly for "accumulating wealth and land" (3.2).

As a group, these farmers were primarily concerned with their quality of life. They reported goals such as "improving the productivity of the land", "leading a peaceful family life in a clean and healthy environment", "improving the land and being able to enjoy farming", "developing financial independence while working full-time on the farm", and having "a simple, sustainable lifestyle".

These young farmers felt the strain of starting a

business. Most said they "felt pressure to balance family and work" (1.9), and admitted doubt in their abilities to "balance their personal desires with their families' needs" (2.4), but still felt that "their" contributions to the family were recognized and appreciated" (1.9).

The project cooperators are a very dynamic group of people. Major life changes occurred in every family in 1992 and 1993. These changes included births, job changes, household moves, deaths or severe illness in the family, marriage, and land purchase. These situations came on top of financial stress and business risk for nearly all families.

Farming Practices

Every farm family in this project expressed a desire to farm with few or no chemical pesticides or purchased fertilizers. These attitudes put them somewhat at odds with their neighbors and relatives, people these beginners depend on for advice and equipment. But these families have continued to farm and learn about farming in ways that they feel protect the environment for their children and their communities. (Due to these families' short tenure on their farms it has not been possible to document environmental or biological responses to their management.)

These families are growing crops common to the area, such as corn, soybeans, alfalfa, and grass. Most are also using tillage equipment and practices similar to their neighbors, again reflecting their available experience and equipment. For the most part, these farmers do little moldboard plowing. They rely instead on disking, which disturbs the soil cover and microorganisms less. Most rely on rotations and mechanical cultivation instead of chemical pesticides to reduce insects and weeds. They are also very careful in selecting equipment that meets an obvious need; for example, a 60 horsepower tractor might be adequate but a 90 horsepower tractor would be unnecessarily big, costing more to purchase and using more fuel. Animal handling facilities have been built or renovated to maintain natural ventilation and allow animals to move about outdoors, reducing the need for purchases of nonrenewable energy or off-farm feed.

These beginning farmers are cautious in their farming operations. This caution reflects their experience level, their available equipment, their mentors, and their risk exposure: these are beginning farmers with little farming experience on their own; they can afford only equipment that is common and well-used; they are often on historic family land and share labor or equipment with their relatives; and they have little money to risk on unproven practices.

However, lack of experience and risk reduction haven't kept these beginning farmers from experimenting. Their lack of money is somewhat offset by creativity and available labor. Nearly every cooperator is trying to do farming jobs with smaller equipment, cheaper tools, different methods, and more labor than their more established neighbors.

One farmer spread soybean seed by hand on a corner of a field too wet for his equipment. Four are using time-controlled grazing with electric fencing to cut feed costs and increase per-acre production. Three tried direct marketing of meat or produce. Two tried pastured poultry production. Two farmers experimented with contour tillage methods. One has seeded all his crop ground to grass and plans to market only livestock. One is feeding his livestock kelp, diatomaceous earth, and probiotic feed to supply natural minerals, worm them

without chemicals, and avoid antibiotic residues in the meat. Three have planted trees to add lumber, fruit and nuts as future enterprises. One sowed turnips with his barley to provide a green forage for his cattle after the barley is harvested. One is composting hog manure before spreading it as fertilizer. All are buying used, relatively small equipment, are fixing it themselves and are taking longer per acre to do fieldwork than are their better capitalized neighbors.

The eleven cooperating families have all planned for diversified farms. None raise fewer than three crops. All have incorporated livestock into their farm enterprises (or plan to do so when they take physical control of their land). Most livestock operations are integrated with crop production, using farm-raised grain, pasture, or hay, and returning nutrients to the crop fields as manure. Not only are these farmers adding value to their raw crop resources with livestock, they are diversifying their marketable products with both plant and animal crops. Some are taking an additional step by marketing their crops or livestock directly to the users: beef and poultry to family and town customers; tomatoes to a local restaurant; eggs to neighbors. These farmers both link others to their farms in this way, and increase their income by eliminating processors and resellers from the marketing of their products.

Both 1992 and 1993 crop years were wet ones, making field work difficult to accomplish at required times. For both large and small farmers, the few dry days were seized impatiently to disk, plant, cultivate, and harvest their crops. Large farmers with many acres of single crops needed large machinery and extra bodies to get the work done before the next rain. Smaller farmers, such as these beginners, had smaller acreages that could be worked between wet spells. These farmers also had diversified crops that didn't require field operations at the same time, so shorter dry spells spread over the growing season still allowed the needed work to get done. One young farmer took advantage of the wet years to convert frequently flooded row crop ground to pasture. Another who had already converted all his cropland to grass did all his "fieldwork" on foot and let his livestock deal with the wet conditions.

While the federal farm bills mandate compliance with erosion control plans on highly erodible land, these beginning farmers' crop rotation-tillage systems meet or exceed USDA Soil Conservation Service (SCS) erosion control guidelines. Some even consider *any* erosion to be unacceptable. For example, most consider fall tillage to be an unacceptable practice because it risks wind and water erosion of bare soil for four to six months each winter. Besides, they say, corn stubble and straw are valuable feed for their livestock that can be used to make meat or milk, while being recycled into fertilizer right in the field.

RECOMMENDATIONS

AGENCIES, ORGANIZATIONS, POLICYMAKERS

Our experiences and discussions with twelve beginning farm families reveal that beginning farmers have special needs both in getting their businesses started and in running their businesses.

These young families have limited financial resources. They have little borrowing power due to their low net worth and their lack of experience as farm managers and operators. Their available cash is also very low due to high startup costs and their penchant for reinvesting income in the farm enterprises. This financial situation handicaps these small and beginning farmers in competing with larger operators for land, equipment and markets. They do not have the cash, time or experience to work out creative financing. Most must rely on outside creditors such as the USDA Farmers Home Administration, which has been notoriously slow in processing applications. Mechanisms to hasten loan approval, supplement beginning farmers' cash down payments, and trade up-front acquisition costs for longer-term financing would help these beginners compete with their better-established neighbors. For these beginners, access to land and facilities is not merely an opportunity to better their standard of living, it is the opportunity to farm.

All of the families in this project relied on off-farm employment to provide either seed money to start farming or to cover living expenses that the small farm business could not yet support. If the local communities were not able to provide these jobs, these farmers would not have been able to start farming. It would therefore appear that rural communities with diverse economies are essential to foster a new generation of farmers. Programs and policies that foster businesses and job creation in small towns would help start the next generation of farmers that would then keep the towns thriving.

The need for off-farm employment to start the farm

further disguises the serious intent of these families to be "real" farmers, since a farm is often defined by farm contribution to total income. The trend for some farm families to desire off-farm employment in addition to on-farm work will continue to disguise these farms' contribution to American agriculture.

Beginning farmers' time is very limited, since they are often working at town jobs to provide for their families while also working after hours to establish a new farm. They need access to professional, educational and extension services at non-standard times and in nonstandard ways. Evening and weekend classes, home-study courses and home visits would meet some of their needs. Professionals, extension specialists, and agencies could provide evening and weekend availability, coordinated offices (such as USDA service centers with ASCS, FmHA and SCS in the same building, not in separate towns), procedures to reduce office visits, and personal farm visits to more effectively answer beginners' needs. Community support services such as legal aid or counselling are also hard to find after business hours. Beginning farmers are constrained in finding and making full use of services that are available only in offices open from 8 to 5.

Beginning farmers also have unique information needs. They are unable to afford state-of-the-art technology that requires high capital investments. Their financial limitations necessitate information geared toward lowest-cost and least-input methods of farming. They don't need to know about specialized equipment as much as how to use existing equipment in an alternative manner. They don't need to know maximum yield or maximum gain techniques for crops or livestock; they want to achieve maximum profit with their resources: e.g. "how to get the quickest gain on pigs with the crops from this farm using the buildings already in place".

They also need information for farmers with limited practical experience. They need to know basic facts: how to dry high-moisture corn in a wet year; how to read a market sheet for per-pound or yield-grade marketing; how to project and analyze a proposed enterprise; how to adjust equipment for differing soil and crop conditions. They also need to be able to make decisions using this information in the context of their diversified, integrated farms. Extension Service publications could both address farm-entry level topics and go beyond single expert-authored articles (that consider practices in isolation of other farm practices or resources).

BEGINNING FARMERS

Beginning Farmers in this project had many suggestions for others contemplating a life on the farm. Start-up strategies for these families emphasized what they already knew and enjoyed doing. They also stressed caution with investments and projects. "Keep your overhead low, and get the first items paid for before expanding into something else, be this livestock, machinery, or farm ground," said one farmer. "Limit yourself in size and scale at first," said another, "to keep from running into problems." Said a third, "Be patient. The more you plan and think before acting, the more success you will have."

Some suggested that making the initial commitment was particularly difficult. "The hardest part is the first shovelful," said one farmer. "Once you take that first scoop, you are committed. Then your neighbors drive by and see you and stop to talk, and you know you have got to finish what you have started." And once started? "Just keep plugging away," said another.

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Many suggested that planning and teamwork were important. One woman advised, "To begin farming or ranching takes time and can't be jumped into. You have to work into an operation or take the time to design and build your own." One farmer cautioned, "This is such hard work that you have to work together. It is really important for both husband and wife to share the same goals."

These young farmers often depended on off-farm income, although most considered off-farm work temporary. "If you have a job in town, keep it," said one farmer, "until it becomes necessary to work full-time on the farm. The key is to know when, by working part-time on the farm, you are not managing it well and lose the money you gain by working off-farm. Finding this point and making the move was extremely important to me emotionally." That point of change was not always easy to identify, however. "Do not overextend yourself both debt and time wise, said one farmer who was working off-farm at the time. "I rented a second quarter section because I wanted to use my machinery more efficiently, but I ran myself ragged because I didn't have the time to handle the extra ground."

These beginning farmers watched their expenses closely to stay within their budgets. "Don't try to keep up with the Joneses," said one woman. "Your neighbors have been farming longer, so they should have more equity and buying power." Machinery purchases loomed large in these budgets, and the farmers tried to buy used machinery still in good enough condition that they could do repair work themselves. One farmer said, "Try to get by with as little machinery as possible, but don't buy junk, because sometimes the fix-up cost can be more than a slightly better piece of equipment."

The cooperating farmers valued their neighbors and relatives for their knowledge and help at crucial times. They recommended finding a "mentor" to guide and watch over the new operation. "Work part-time with local farmers who will help you," said one beginner. "Work with them and they will want to help you."

The young farmers also recommended finding others to talk with, share problems with, or to visit when they needed a break from the farm. "Try to find other beginning farmers/farm families and network with them," said one farm wife. "These people more adequately share your needs, obstacles and frustrations, more-so than established farmers. Visit their farms and get that beginning farm family interaction."

SUMMARY

The Beginning Farmer Sustainable Agriculture Project works with beginning farmers in developing and testing sustainable agriculture strategies to get started in farming. It engages and supports beginning farmers in exploring options through mutual-help groups and evaluates entry strategies through analysis of 12 case study farm families. Successful groups were formed following a multi-day course where participants got to know each other and shared learning experiences on proactive, whole-farm planning. Continued group activity will require additional outside guidance and support. New groups will require it from inception.

Individual beginning farmers emphasized family, personal satisfaction, and environmental concerns in their goals. Their start-up strategies emphasized a low debt approach to acquiring machinery, facilities and livestock. They are using older machinery, raising their own livestock, and integrating several enterprises to make full use of on-farm resources, including pasture, crop waste, livestock manure, available labor, and management skills. The study group increased its equity an average of 16% over the first year of the study period. All families held off-farm jobs for part of the study period, and some families held three off-farm jobs. Their time and energy for off-farm activities, education and recreation was extremely limited by these time constraints as well as by financial limitations. Their needs reflect these limitations: availability of services in non-standard forms and times; information on basic farm, business and interpersonal techniques; information on low-cost practices; availability of networks to share ideas and problems; jobs in nearby small towns; and financing options for low-net-worth but technically competent managers. Acceptance of sustainable agriculture practices will depend on effective information delivery and opportunity to implement practices, which may take years. Advice from these beginners to others reflects the problems they have had in starting small businesses with limited technical, professional, financial, or peer support, and the benefits from support groups such as those started by this project.

APPENDIX

FARM FAMILY SUMMARIES

Bill and Deb B. Bill and Deb have one son, age 5. They live four miles from a town of 617. Bill ranches full-time while Deb works part-time in town. Bill is the fourth generation on this farm but Deb is from a ranch 250 miles west. Their goals include living sustainably while remaining financially solvent. They are now managing 810 acres (400 owned), with 210 under corn, oats and hay and 600 acres in native pasture. Bill took over some of his father's land when ill health forced him into retirement, and has built his cattle herd to 100 head in the last ten years by retaining most of each year's heifer calves. Deb's income covers living expenses, so they have kept debt to near zero while the farm paid for its own expansion.

George and Sheryl B. George and Sheryl were married in August 1993, two years into this project. They have two children, ages 12 and 10. Both George and Sheryl work full time off-farm, although George's work schedule is flexible. Their 160 acre farm is four miles from a town of 82. George began by working part-time off-farm after college, buying cattle and sheep, and running them on his father's farm. He is buying his farm from his great-aunt while working full-time, farming, and renovating the buildings. He has shared labor and equipment with his brothers, who live nearby. His goal is to farm sustainably and to build a largely self-sufficient farm.

Dan M. and Gayle C. Dan and Gayle have two children, ages 3 and 1. They also serve as foster parents, currently to three other children. Dan grew up on this farm while Gayle is from suburban Chicago. Gayle works part time in a nearby town (population 5200, 16 miles away) and has begun teaching courses at the college there. Dan manages the market garden, livestock, and household. They are renting this farmstead from Dan's mother while most of the farm is rented to neighboring farmers. Dab and Gayle hope to build a community-supported farm producing livestock, poultry, and garden produce. Off-farm work has so far subsidized their efforts to produce organic vegetable seeds, herbs, and direct-market poultry.

Doug D. Doug grew up in Lincoln (pop. 170,000) but has bought 80 acres that adjoins his family's farm three miles from a town of 179. The farm is rented to neighbors for row crop and grain production, but Doug plans to convert the farm to hay and pasture and manage it himself in 1994. He has worked for a state agency in the summer and sold firewood from the farm woodlot in the winter. Doug is building a house and barn on the farm because the original buildings were razed by the previous owner. He has financed the buildings, equipment and land with family loans, off-farm work and trading help with his neighbors.

Steve and ViVi F. Steve and ViVi have three children, ages 10, 7 and 1. They live seven miles from a town of 1,950. Steve was born on the farm but grew up in a nearby town (pop. 20,000). ViVi also grew up there. Both have family in the area. Steve works full-time at a manufacturer (15 miles away) while ViVi manages the farm animals during the day. They own 80 acres of crop and hay ground and have 15 sows (farrow-to-finish). Their goals include being able to make their living from the farm. Steve has hired much of the crop work done due to his time constraint and lack of machinery. As the farm generates income, however, he is buying his own equipment and is expanding the livestock operation.

Shelly and Hoss H. Hoss and Shelly have three children, ages 3, 1 and one month. Hoss grew up on this farm and is renting it from his mother. Shelly is from a nearby community. They now have a dairy herd of 50 cows and 25 heifers and manage 320 acres of crop and pasture land. Both Hoss and Shelly work on the farm now, but Hoss paid for much of his equipment (used) 5 years ago with an off-farm job. They hope to build the herd to 100 cows and be able to buy the farm. They have worked closely with friends, relatives, and neighbors to borrow and purchase equipment and to share labor.

Marty and Mindy H. Marty and Mindy have two children, ages 2 and 4. Marty grew up on a midwestern farm while Mindy grew up in a small town. They began raising hogs part time on their rented farmstead in eastern Nebraska while looking for a farm to rent or buy. In early 1992 they moved onto an organic grain farm as managers, arranged through the CRA Land Link Program. Marty farmed 800 acres of crop ground while renting building space on the farm for his sow herd. In late 1992 Marty and Mindy sold their sows and moved to town to finish Marty's college degree. Marty is now part-owner of a small business and they have no plans to return to farming.

Dave and Deb K. Dave and Deb have three daughters, ages 6, 5 and 2. They recently purchased a farmstead six miles from a town of 950. They are both from farms in the area. They have built their sow herd over the past ten years while living on their parents' farms and on rented acreages. Dave, a self-employed carpenter, built portable hog buildings that have moved with them and is now building his own barns. Deb has run a licensed day-care business out of their home. They plan to rent, then buy the surrounding cropland. They have shared equipment and labor with their relatives and neighbors.

Kevin and Sophie R. They have one daughter, age 3. Kevin grew up on a farm on the outskirts of a midwestern city (population 54,000) near their current home, while Sophie is from a suburb of Paris, France. They both work part-time and have invested in residential properties. They are renovating and selling these to pay for the 160 acre farm, which they bought in 1992, 100 miles away. They are renting out the crop ground on shares and are cutting timber from the farm with which to build their own cordwood house. Their written goals include being financially self-supporting on the farm (primarily with livestock), building a diverse income and landscape, and having a peaceful family life.

Pat and Julie S. Pat and Julie have three children, ages 5, 3 and 1. Their farm, where Pat's great-grandmother was born, is four miles from a town of 150. Pat grew up on this farm and Julie on a farm 25 miles south. Pat's father lost this farm during the mid-80's farm crisis, but relatives bought it and are selling and renting portions of it to Pat and Julie. Pat has converted all the crop to hayland and pasture and he plans to graze the entire 400 acres. Cattle are owned in a three-way partnership with relatives while Pat and Julie own 40 sows. Julie works part time; her income supports the family while Pat builds the farm, which now supports itself after four years. Their goals include improving the land, owning the farm, and being able to enjoy farming with their children.

Scott U. Scott's farm is five miles from a town of 1030. He grew up 40 miles south but is renting this farm, formerly his grandfather's, from his father. Scott has a herd of 25 cows and 15 ewes and manages 230 acres of crop and pasture land. Scott has built his farm through 4-H livestock projects, buying good used machinery, hard work, and help from his family. He recently took a full time job at a local elevator to increase his income. Scott has no immediate plans to purchase land; he wants to be sure he can manage well enough before committing to land payments. He is trying to manage his farm to improve its use and production.

Clem and Laurie W. Laurie and Clem have two children, ages 12 and 9. Their farm is 13 miles from a town of 950. Both Clem and Laurie grew up on farms in the county and have family within 35 miles. Their goals include improving the land, giving their kids a choice to farm eventually, and keeping their operation as natural as possible. They are living on a rented farm arranged through the Land Link Program, but are planning to buy their own farm. Clem works part-time for a neighbor while Laurie works part-time in a town 20 miles away (pop. 19,000). Their current operation consists of 30 head of beef cattle, 30 sows (pigs sold as feeders), and crops grown for livestock feed. They manage over 450 acres of crop, hay, and pasture land on their rented farm and parts of two farms owned by Clem's family. Their strategy is to keep capital purchases small, to build the livestock from within and to use livestock as an investment and savings account.